

ROLE OF NON-WOOD FOREST PRODUCTS IN POVERTY REDUCTION AMONG TRIBALS IN WESTERN GHATS OF TAMILNADU

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ABSTRACT

The enormous natural resources of India's forests including Non-Wood forest products (NWFPs), such as medicinal and aromatic plants, leaves, seeds, nuts, fruits and gums offer employment that provide up to half the income of about 25 % of the country's rural labor force. Despite of the potential benefits that are offered by non-wood forest products, it has been widely documented that forest still offers little in terms of opportunities for expanding livelihood options and assets required to reduce livelihood vulnerability. Based on this, a study was carried out to determine the contribution of NWFPs towards poverty reduction by assessing potentials and constraints experienced by adjacent local communities towards their exploitation. The specific objective of the study is to assess the role of NWFPs contribution to tribal income and also influence on the poverty reduction. The study was conducted in Kodaikanal and Palani range in Dindigul district of Tamil Nadu state. The data were collected personally in cooperation with forest officers and other officials of the district by using pre-tested interview schedule. The findings reveals that the 65 selected households involved for collection of myrobalam (kadukkai), honey, amla, broom grass, stone flower, pepper, and coffee. These products were easily accessible and available to them and these activities are the important source of employment and income. The tribes earned at an average per day, from the collection of NWFPs of Rs700 for broom grass, Rs.650 for kadukkai, Rs.600 for amla, Rs.500 for pepper, and Rs.400 for coffee and stone flower. Regarding honey collection, the tribes earned Rs.400 per liter. Majority of the respondents (92.3 %) were facing the problems related to lack of transport facilities for NWFPs existence of bad weather (76.9 %), deforestation(69.2 %), fluctuated market price (61.5 %), lack of storage facilities for NWFPs (56.9 %), over collection of outsiders (38.4 %), low infrastructure facilities for NWFPs (18.4 %), lack of skill oriented training for NWFPs(16.9 %) and lack of timely information for marketing of NWFPs (15.3 %). It is suggested that there is a need to take necessary steps by the government to eliminate these existing problems faced by the respondent of study area. Respondents expected nearby Ration shop and Primary health centre from the district authority.

Keywords: non-wood forest products, poverty, tribals, Western Ghats

INTRODUCTION

In recent years, forests have been increasingly recognized as rich reservoirs of many valuable biological resources, not just timber. The term non-wood forest product (NWFP) emerged as an umbrella term to recognize the products derived from these various forest resources as a group. FAO's experience in community forest management in developing countries has documented and important roles of NWFPs which includes income generation for rural development; more equitable sharing of the benefits of forest and local participation in forest management (FAO,2004). The recorded history is people have valued forests not for wood, but for other products. NWFPs rank among the oldest traded commodities (Iqbal, 1993) Dealing in NWFPs it provides employment during slack periods of the agricultural cycle, and provide a buffer against risk and household emergencies in rural populations (the largest group) those, who have traditionally used these items for livelihood and social and cultural purposes.

Poverty has been historically accepted in some parts of the world as inevitable due to the imbalance between economic growth and population growth. In most cases, dependent on non-industrialized economies while populations grew almost as fast will result in wealth scarcity. Out of total population of

over 1.25 billion, about 30 million people still live in extreme poverty in India. According to Rengarajan Committee report, 30.9 % of the rural population and 26.4 % of the urban population were below the poverty line in 2011-12. The all India rate was 29.5 %. Poverty line in India is minimum income of Rs.47 in urban areas and Rs 32 in rural areas per day, which is absurd. The Constitution of India has provided many safeguards to the tribal communities for their political, educational, cultural, economic and social development. As they are considered as weaker section of the society, there are quite a number of safeguards to protect them from social injustices and exploitation. In order to avail constitutional safeguards and government facilities, a number of communities has been declared as Scheduled Tribes (STs) as per the constitutional provisions.

An overview of case studies indicates that forest products contribute between 20 % and 40 % of total household income in forest areas, and that poor households tend to be disproportionately dependent on forest resources (Vedeld et al., 2007). Based on this type of finding, investment in NWFPs use has often been proposed as a method of poverty alleviation. Although NWFP sales often supplement income, it has been suggested that the same open-access characteristics that make them available to poor households in the first place make them poor candidates for poverty reduction schemes (Arnold and Perex, 2001; Belcher, 2005).

In recent years, both research and policy debate have increasingly considered reliance on NWFPs as a livelihood strategy with many commentators highlighting a high dependence on forests and NWFPs especially amongst asset-poor households. The livelihoods of the rural poor can be compared to 'snake and ladders' whereby the snakes represent raps that contribute towards poverty and the ladders, resources (including natural resources) and relationships that improve or worsen a household's degree of poverty. The range of livelihood strategies include both off-farm and land – based livelihood strategies including the use of non-wood forest products both for household consumption and for sale. The contribution made by these NWFPs to household income has been found, in certain cases, to be considerable and comparable to other income sources (Dovie et al., 2001).

The present study focused on processing of NWFPs in Palani and Kodaikanal range in Dindigul District. It also revealed the contribution of NWFPs in poverty reduction and food security through its use, processing and marketing of NWFPs. Despite of these potential benefits that are offered by non-wood forest products, it has been widely documented that forest still offers little in terms of opportunities for expanding livelihood options and assets required to reduce livelihood vulnerability (Arnold and Ruiz-Perez, 2001). Based on this, the study was carried out to determine the contribution of NWFPs towards poverty reduction by assessing potential and constraints experienced by adjacent local communities towards their exploitation.

Paliyar tribals, in hills area are very poor and no awareness of marketing demand. The problem of rural poverty, food security and sustainable livelihood continue to be key policy challenges in India. The persistence of mass poverty among adivasis in India has been attributed to the problem of degradation of the natural resource base, resulting in its failure to support a decent livelihood for the adivasis. In the past researches no such study concentrate the NWFPs contribute tribal income and livelihood and a few study only assess the projects and schemes for welfare of the tribals. The present article deals with livelihood issues in respect of the paliyars the larger tribe in Dindigul district of Western Ghats of Tamilnadu, highlighting their livelihood and exploring how these can be used to ensure food security.

The specific objectives of the study are to study the social conditions of tribal; to analyse Economic conditions and the role of NWFPs contribution in tribal income; to harvest the influence of NWFPs on the poverty reduction and to find out the problems faced by tribals and gave the suggestions to overcome it.

RESEARCH METHOD

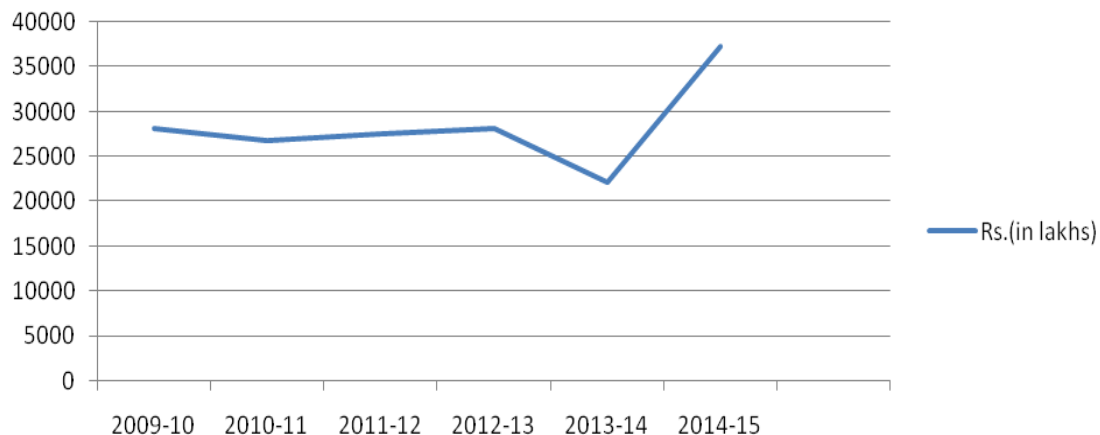
The study was conducted in Kodaikanal and Palani range in Dindigul district of Tamilnadu state during July-August 2016. Out of total 7 blocks in the Dindigul district, Kodaikanal and Palani were selected purposively because maximum numbers of tribes and maximum forest area comes under these blocks. Eight villages were selected randomly from each selected block. The sample

Villages are Ganeshapuram, Anjuveedu, Bharathianna Nagar, Colonymedu, Samakaatupallam, Thamarai kullam Adukkam, Palamalai,. The main source of information for the study and were collected through interview schedule on 65 households and were randomly chosen from 8 villages around Kodaikanal and Palani range , about the role of NWFPs in food security , economic development , different type of NWFPs and distribution. Also group discussion were held out in these villages to collect information from tribal committee leaders and forest officers

RESULTS AND DISCUSSION

During the season of collection, Local tribals including male, female and children are collecting the NWFPs from the forest. Since the collection season is spread over the whole year for different products, the NWFPs collection provides employment for paliyar tribes almost throughout the year, the collection and quantity depend on the availability of NWFPs. For the collection of NWFPs villagers including tribal women go deep inside the forest and cover a distance of 3-7 km. The tribal include their family members in the collection of NWFPs.

Non –wood forest products available inside forest area can be classified under various heads. They are medicinal plants, seeds, leaves, grass, oil from grasses, honey, fruits, gums, resins, etc. Some of these species were very important for local communities to meet their needs. According to forest sector report 2015 the value of output from non-wood forest products in Tamilnadu State during 2009-10 was Rs. 28168.8 lakhs and in 2010-11 it was declined to Rs. 26792.7 lakhs. It has increased in 2011-12 to Rs.27504.4 lakhs than in 2012-13, it also increased to Rs.28184.2 lakhs. In 2013-14 it was declined to Rs. 22150.7 lakhs again increased in 2014-15 to Rs. 37299.9 lakhs. This detail shown in Figure 1.



Source: Forest sector report 2015

Figure 1. Value of output from NWFPs of Tamilnadu (in Rupees)

Social descriptions of respondents

As shown in Table 1 the respondents age, education status, gender were described. 50 % of respondents from Kodaikanal range and 50 % of respondents from Palani range were selected. Average age of respondents falls between the range of 40 to 43 years old, among the respondents 57 % were male and 43 % were female in Kodaikanal range. In Palani range male and female respondents were equal. 9 % of the respondents were literate and 79 % respondents were illiterate in Kodaikanal range. In Palani range, 30 % respondents were literate and 69 % respondents were illiterate. 12 % respondents in Kodaikanal and 15 % respondents in Palani range were known to sign.

Table 1. Social description of respondent (n=65)

| Description | Kodaikanal Range | Palani Range | Dindigul district |
|----------------------------|------------------|--------------|-------------------|
| No of respondents | 35 | 30 | 65 |
| Average age of respondents | 41 | 42 | 41 |
| No of Male (%) | 57 | 50 | 54 |
| No. of Female(%) | 43 | 50 | 46 |
| Literate(%) | 9 | 30 | 19 |
| Illiterate{ %) | 79 | 55 | 69 |
| Only Sign(%) | 12 | 15 | 12 |

Source : Primary data

Source of employment:

As shown in Table 2, the major employment source (40%) for the respondents in collection of NWFPs, 29 % employment from non- agricultural resources and 21 % from agricultural resources, minimum (10 %) employment from other resources in Kodaikanal range. Majority employment source (41 %) for the respondents in collection of NWFPs, 27 % employment from non-agricultural resources and 20 % employment from agricultural resources, minimum (12 %) employment from other sources in Palani range. In Western Ghats area the majority employment source (41 %) for the respondents in collection of NWFPs, 28 % employment from non-agricultural resources and 20 % employment from agricultural resources. The minimum employment of respondents (11 %) from other sources.

Table 3 reveals that the majority source of income (36%) from NWFPs, 34 % earnings from agricultural work, 17 % earnings from other sources and 13 % earnings from livestock rearing in Kodaikanal range. The majority sources of income 43 % from NWFPs, 36 % earnings from agricultural work, and 21 % earnings from other sources in Palani range. In Western Ghats area majority of earnings 40 % income from NWFPs, 35 % earnings from agricultural work and 19 % earnings from other resources and minimum earnings 6 % from livestock rearing .

Table 4 represents the involvement of the respondents in the collection of particular NWFP. As shown in table, 65 selected respondents were going for Myrobalam (kadukkai) collection, followed by Honey, Amla, Broom grass, Stone flower, Pepper and Coffee. So, we can infer from these findings that these products were easily accessible and available to them and act as an important source of employment and income. Respondents were earning Rs.700 per day from Broom grass, Rs.650 per day from Kadukkai, Rs.600 per day from Amla, Rs.500 per day from Pepper and Rs.400 from coffee and stone flower and the respondents were earning income Rs.400 per litre from Honey collection.

Table 5 demonstrates that respondents distribution according to the problems faced by them in the collection and marketing of NWFPs with priority. The result reveals that majority of the respondents (92.3 %) were facing the problem in lack of transport facilities for marketing of NWFPs, followed by existence of bad weather (76.9 %), deforestation (69.2 %), fluctuated marketprice (61.5 %), lack of storage facilities for NWFPs (56.9 %), injury caused by wild animal(38.4 %), over collection of outsiders (30.7 %) low infrastructure facilities for marketing of NWFPs(18.4 %), lack of skill oriented training for NWFPs collection and marketing(16.9 %) and lack of timely information for marketing of NWFPs (15.3 %)

Table 2. Source of employment

| Employment source from | Kodaikanal Range (No of days) | Palani Range (No of days) | Westernghats (No of days) |
|---------------------------|-----------------------------------|------------------------------|------------------------------|
| Collection of NWFPs | 146(40) | 151(41) | 148(41) |
| Agricultural resources | 76(21) | 74(20) | 75(20) |
| Non- Agricultural sources | 106(29) | 98(27) | 102(28) |
| Other Sources | 37(10) | 42(12) | 40(11) |
| Total | 365(100) | 365(100) | 365(100) |

Note : Figures within parenthesis denotes percentages

Source: Primary data

Table 3. Average annual income of the sample respondents

| S.No | Source of Earnings | Average Earnings (in Rs) | | |
|-------|------------------------|--------------------------|--------------|---------------|
| | | Kodaikanal Range | Palani Range | Western Ghats |
| 1 | From NWFPs | 146940(36) | 179820 (43) | 163380(40) |
| 2 | From Agriculture | 135900(34) | 148980 (36) | 142440(35) |
| 3 | From Livestock rearing | 50220 (13) | --- | 25110(6) |
| 4 | From Other sources | 68256(17) | 86940(21) | 77598(19) |
| Total | | 401316(100) | 415740(100) | 408528(100) |

Note:Figures within parenthesis denotes percentages

Source: Primary data

Table 4. Average earnings from non-wood forest products in Western Ghats

| Name of plant | Scientific name | Collected parts as NWFPs | NWFPs collected by | Month of collection | Amount of product by each family /day |
|---------------|---------------------|--------------------------|--------------------|---------------------|---------------------------------------|
| Kadukkai | Terminalia chebula | Fruit | Male/Female | Dec-Apr | Rs.650/day |
| Honey | Honig | ----- | Male | July-Sep | 8 litre/month (1lt = Rs.400) |
| Amla | Phyllanthus Emblica | Fruit | Male/Female | Dec-Apr | Rs.600 /day |
| Broom grass | Thysanolaena maxima | Grass | Male/Female | Nov-Aug | Rs.700/day |
| Stone flower | Lichen parmelia | Leaf | Male | Aug-Feb | Rs.400/day |
| Pepper | Piper nigrum | Fruit | Male | Jan-march | Rs.500/day |
| Coffee | Coffea Arabica | Seed | Male/Female | Dec-Feb | Rs.400/day-M Rs.200/day-F |

Source: Primary data

CONCLUSION AND RECOMMENDATION

Non –wood forest products constitute an integrated component of food for the tribals and other forest dependent peoples. Non –wood forest products provide greater employment to the people than wood. They have much greater potential for providing employment in future. NWFPs play an important role in sustainable livelihood of the tribes living in forest fringes. Non timber forest products also serve as an important source of food, nutrition, medicine, income and employment. But due to some prevailing problems like low and fluctuated market price, lack of developed market, existence of bad weather, injury caused by the wild animals and also causes significant interruption in collection and marketing of NWFPs. Due to poor transport facilities and non-availability of government society for the respondents were not getting reasonable prices for their NWFPs. Thus, they were derived less profit from the marketing of NWFPs. So, there is a need to take necessary steps by the government to eliminate these existing problems faced by the respondent of study area. Respondents expect nearby Ration shop and Primary health centre from the district authority. In this context, suggestion that obtains from the respondents to overcome these problems should be involved in the strategies made by the government to solve such problems. In view of that, several initiatives have been taken by state governments, particularly in tribal communities in order to better utilize these resources for comparing the livelihoods of forest dependent people. In spite of the present shift towards NWFPs the situation has been changed much in favour of poor tribals who are engaged in the collection and processing of NWFPs.

Study results suggest that the main source of earnings for all households in that villages comes from NWFPs. Suggesting that they are highly dependent on NFWP for sustainable development in their livelihood, they need to afforest their areas because they don't have own land. Government proposed to give 2 acres land for tribals. Forest department will take effort to implement it. In view of importance given for their agricultural production, the scope for increased outlay in cultivation sector should be widened. Since Myrobalan (kadukkai), Amla and vegetables cultivation offer great scope for increasing income of tribals in Western Ghats area.

There is need for constituting district level committees with collector and forest officials for effective planning implementation and monitoring of their development. With the help of forest officers to give full support for VFC (Village Forest Committee) of tribals and start Cooperative marketing society for their improvement of economic position. The scope for tribals to grow grass varieties suitable for the area needs exploring as they can get more income from their dry crops; immediate steps should be taken for provision of roads and primary health centre, ration shop, safe drinking water and also other sanitary facilities. Forest department and village panchayat should approach Government of Tamilnadu to provide these basic amenities.

REFERENCES

- Arnold, J. M. and M.R. Pérez. 2001. Can non-timber forest products match tropical forest conservation and development objectives? *Ecological economics* 39(3): 437-447.
- Belcher, B. M. 2005. Forest product markets, forests and poverty reduction. *International Forestry Review* 7(2), 82-89.
- Dovie, B. D., C. M. Shackleton, and E. T. F. Witkowski. 2001. Involving local people: reviewing participatory approaches for inventorying the resource base, harvesting and utilization of nonwood forest products. *Proceedings FAO/ECE/ILO International seminar on the harvesting of Non-Wood Forest Products, Izmir October 2-8 2000. Turkey.* pp. 175-187.
- FAO. 2004. The state food insecurity in the world 2004: Monitoring progress towards the World Food Summit and Millennium Development Goals. Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla, Rome.
- Iqbal, M. 1993. International trade in non-wood forest products: an overview. FO: Misc/93/11 Working Paper. Food And Agriculture Organization Of The United Nations, Rome
- Vedeld, P., A. Angelsen, J. Bojö, E. Sjaastad, and G.K. Berg. 2007. Forest environmental incomes and the rural poor. *Forest Policy and Economics* 9(7): 869-879.